

# GOLD NANOPARTICLES

Nanotechnology refers to science dedicated to materials having dimensions in the order of 100nm or less. Gold nanoparticles are a suspension consisting of sub-micron gold nanoparticles suspended within a solvent, most often water. They have unique optical, electronic, and thermal properties and are used in a wide range of applications including diagnostics (lateral flow assays), microscopy and electronics.

## Working to our customers' requirements

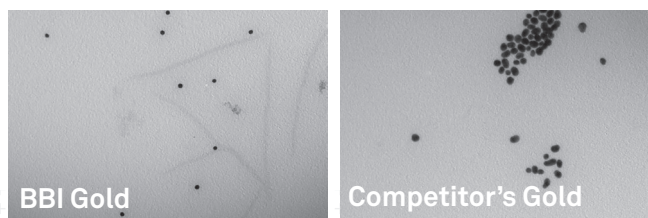
At BBI we understand our customers have different requirements, so offer a range of particle sizes from 5nm to 250nm to cater to those needs, whatever the application:

Size of Gold Nanoparticle	Mean Particle Size Range	Maximum Acceptable %CV	Number of Odd Shapes per 100 Particles
5nm	4.5 – 6.0 nm	15%	≤5
10nm	9.0 – 11.0 nm	10%	≤5
15nm	14.0 – 16.5 nm	10%	≤5
20nm	19.0 – 21.0 nm	8%	≤5
30nm	28.0 – 32.0 nm	8%	≤5
40nm	37.0 – 43.0 nm	8%	≤5
50nm	47.0 – 53.0 nm	8%	≤5
60nm	57.0 – 63.0 nm	8%	≤5
80nm	77.0 – 85.0 nm	8%	≤10
100nm	96.0 – 104.0 nm	8%	Not Applicable
150nm	145.0 – 155.0 nm	8%	Not Applicable
200nm	194.0 – 204.0 nm	8%	Not Applicable
250nm	242.0 – 258.0nm	8%	Not Applicable

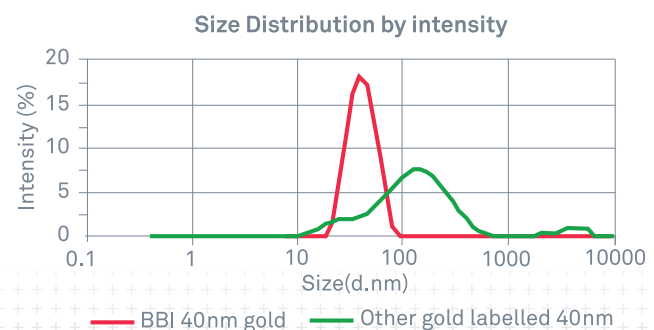
## Gold in rapid diagnostic tests

The quality and performance of a conjugate is critical to achieving consistent, accurate results in lateral flow tests. Gold nanoparticles offer excellent stability and sensitivity. As the demand for increased sensitivity grows, gold has become regarded as a reliable raw material to provide an accurate visual reading.

## Good gold versus bad gold



BBI's unique manufacturing technique allows for the production of large batches of gold to a high level of reproducibility of size, dispersion and shape. This ensures a firm foundation for conjugation and peace of mind that your rapid assay will provide reliable results. This is not the case for all gold nanoparticles.



Order your evaluation sample today [www.bbisolutions.com](http://www.bbisolutions.com)

## The BBI difference

Used in over 400 million assays every year, our gold manufacturing technique guarantees:

- + **Sensitivity** – with  $\leq 5\%$  uneven shapes and a CV of  $\leq 8\%$ , the uniform shape and size of BBI gold ensures even antibody binding, giving reliable results in your assay
- + **High stability** – 1 year shelf life ensures a settled test manufacturing regime saving you time and wastage
- + **Scalability** – our batch sizes go up to 350L + to ensure you have continuous supply
- + **Quality** – BBI gold must pass strict quality procedures before its released to our customers, guaranteeing impressive performance characteristics at scale

## What our customers say

*“The gold and conjugation processes at BBI are unrivalled – we found that BBI was the best that we could work with.”*

## Advantages of outsourcing

There are many hidden costs in producing gold nanoparticles and conjugates in house. By outsourcing manufacture to BBI, you can benefit from:

- + **More R&D time:** valuable R&D time is freed up to concentrate on the development of your assay systems
- + **More tests per litre of gold:** using BBI gold results in more tests per volume of conjugate, because consistent gold means less waste
- + **A faster route to market:** using BBI gold you can avoid delays caused by using a poor, inconsistent gold label, and commercialise your assay faster
- + **Enhanced sensitivity:** 25 years of experience and our proven track record in manufacturing gold nanoparticles will put you one step ahead of the competition

### Related Products

**Gold Starter Packs** Are you using gold for the first time, or trying a new process and are unsure of which size particle to purchase? Our gold starter packs allow a comprehensive evaluation, comprising 100ml and/or 20ml each of a selection of our gold nanoparticles.

**High OD Gold** High OD gold can be used to simplify the conjugation procedure. By removing centrifugation steps in the concentration process there may be an opportunity to reduce production time, labour costs and waste. Our High OD Gold nanoparticles are available as 20nm and 40nm and at concentrations of OD5 and OD10.

Order a sample today [sales@bbisolutions.com](mailto:sales@bbisolutions.com)

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